

CLAIMS

What is claimed is:

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1. An optical system production line, comprising
an optical bench supply that provides optical benches;
a component supply that provides optical components;
a pick-and-place machine that receives optical benches from the bench supply,
picks optical components from the optical component supply, and places the
optical components on the optical benches to which the optical components are
secured; and
optical system aligner that characterizes the positions of the optical components on
the optical bench and mechanically adjusts the relative positions of the optical
components.
 2. An optical system production line as claimed in claim 1, wherein the pick-and-
place machine secures the optical components to the bench by solder bonding.
 3. An optical system production line as claimed in claim 1, wherein the optical system
aligner characterizes the positions of the optical components by activating an optical
link of the optical system, detecting an optical signal after interaction with at least
some of the optical components, and adjusting the optical components to optimize
transmission of the optical signal over the link.
 4. An optical system production line as claimed in claim 1, wherein the optical system
aligner energizes an active component of the optical system and adjusts the optical
components to optimize optical signal transmission through the system from the active
optical component.

5. An optical system production line as claimed in claim 1, wherein the optical system aligner energizes an active component of the optical system and adjusts positions of at least one passive optical component to optimize optical signal transmission from the active component to the at least one passive component.

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contd)

6. An optical system production line as claimed in claim 1, wherein the optical system aligner energizes an active component of the optical system and adjusts positions of at least two passive optical components to optimize optical signal transmission between the passive components.

7. An optical system production line as claimed in claim 1, wherein the pick and place machine is a flip-chip bonder.

8. An optical system production line as claimed in claim 1, wherein the alignment system comprises two jaws for engaging a mounting structure supporting the optical component and moving the structure relative to the bench.

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